

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

Please cancel claims 2 and 9-17.

Please add claims 1 and 3--8

1. A method of building and maintaining an object-oriented database from a vector product format (VPF) database, comprising:

instantiating objects of the object-oriented database, using the VPF database;

initializing spatial and non-spatial feature data of the object-oriented database,

spatially indexing data among objects across hierarchical levels of the objectoriented database;

and

updating data of the object-orientated database; and

exporting the contents of the updated object-oriented database to teh VPF database.

3. A method of building and maintaining an object-oriented database from a vector product format (VPF) database, comprising:

instantiating objects of the object-oriented database, using the VPF database;

initializing spatial and non-spatial feature data of the object-oriented database,

spatially indexing data among objects across hierarchical levels of the objectoriented database;

and

updating spatial and non-spatial data.

4. The method according to claim 3, wherein the step of initializing spatial and non-spatial feature data creates a feature level having:

non-spatial data which provides characteristic properties of each feature;

spatial data, including primitive data and topological information, which provides spatial relationships between a feature object and other feature objects within a specified coverage; and

wherein related non-spatial and spatial data are directly accessible from the feature object.

5.. The method according to claim 4, wherein the step of updating spatial and non-spatial data includes adding, changing, and deleting feature, primitive, and topological data within the database and further includes updating all object links referencing the feature, primitive, and topological data.

6. The method according to claim 3, wherein the step of spatially indexing data is applied to one or more databases whose format comprises:

a flat file;

a raster product format;

a vector product format; and

a text format.

7. The method according to claim 6, further comprising a step of retrieving data objects matching a user-specified query based on at least one of the following data characteristics:

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Serial No.

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feature attributes;
geometrical constraints;
topological constraints; and
geographical constraints.

8. The method according to claim 7, wherein the step of retrieving data objects includes:

a flat file;
a raster image;
a VPF feature; and
text data.